UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,218	03/12/2001	Richard D. Pollak	RDP001U	8538

7590 10/02/2002

DON E. ERICKSON
Law Office, PMB 182
3830 Valley Center Drive # 705
San Diego, CA 92130

EXAMINER	
PARKER, FREDERICK JOHN	
ART UNIT	**PAPER NUMBER**
1762	2

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF2

Office Action Summary	Application No. 09/803,218	Applicant(s)	
	Examiner	Group Art Unit	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-19 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-5, 8-10, 16-19 is/are rejected.

☒ Claim(s) 6, 7, 11-15 is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: on line 3, "temp" should be written out as temperature. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2.The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1,10,16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 1,10,17,19 are vague and indefinite because the relative term "light" does not clearly describe the intended yellow color required by the claims.

- Claim 16: "outer surface" lacks proper antecedent basis.

- Claim 18: "surface" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by SU 1686045 (abstract).

The abstract discloses imparting coloration to sapphire jewelry stones by heating at a selected temperature and for a selected time the stones in a powdered metal oxide, such as strontium oxide to provide orange coloration (orange inherently being within the color spectrum of yellow to red, ROYGBIV). The claims are therefore clearly anticipated by the abstract.

5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Haynes US 3616357.

See abstract; examples 1 & 5.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Carr et al US 3897529.

Carr et al teaches changing/enhancing the color of gem corundum (expressly citing sapphire, EX 2) by packing stones into a crucible of powder

comprising a metal oxide colorant agent and heating for appropriate times, temperatures, and firing conditions to cause coloration, including products being red in appearance.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3,4,5 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1686045.

SU 1686045 is cited for the same reasons above, which are incorporated herein. The abstract teaches the selected times and temperatures to be 2-10 hours at 125-1400 degrees C, respectively, which overlap the values of claims 3-4. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the times and temperatures disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see In re Wortheim 191 USPQ 90.

As to claim 5, it is the Examiner's position that cleaning a surface prior to a coating or surface diffusion process is well-known and conventional in the art in order to ensure uniform coating/ diffusion and contact with a coating material/ reactant, hence it would have been obvious to clean the jewelry stones of the reference to provide these benefits.

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1686045 in view of Carr et al US 3897529.

SU 1686045 is cited for the same reasons above, which are incorporated herein. Post-treatments are not taught.

Carr et al teaches on column 4, 29-35 to subsequently thermally treat gem materials which have been color enhanced at about 1100 to 1500 degrees C to cause the corundum to be asteriated (form a reflective star-like figure popular in gems). While specific atmospheres are not stated, one of ordinary skill in the art would have known that oxidizing versus reducing atmospheres cause variations in color due to oxidation or reduction of colorants, and hence the selection of such atmospheres would have been an obvious variation within the purview of one of ordinary skill in the art to cause coloration differences according to market preferences.

11. Claims 4,5,8,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr et al US 3897529.

Carr et al is cited for the same reasons above, which are incorporated herein. Column 4, 13-15 teaches the times of 2-200 hours depending on the nature of material being treated which overlaps the values of claim 4. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the times and

temperatures disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see In re Wortheim 191 USPQ 90. As to claim 5, it is the Examiner's position that cleaning a surface prior to a coating or diffusion process is well-known and conventional in the art in order to ensure uniform coating/ diffusion and contact with a coating material/ reactant, hence it would have been obvious to clean the corundum of the reference to provide the benefits previously stated.

As to claims 8-9, Carr et al teaches on column 4, 29-35 to subsequently conventionally thermally treat products at about 1100 to 1500 degrees C to cause the corundum to be asteriated (form a reflective star-like figure popular in gems). While specific atmospheres are not stated, one of ordinary skill in the art would have known that oxidizing versus reducing atmospheres cause variations in color due to oxidation or reduction of colorants (see also examples), and hence the selection of such atmospheres would have been an obvious variation within the purview of one of ordinary skill in the art to cause coloration differences according to market preferences.

12. Claims 6,7,10-15 distinguish over the prior art which does not teach nor suggest color enhancing a gemstone/topaz/sapphire in combination with a

finely divided form of copper metal or copper oxide in the range of about 700-1000 degrees C, with the enhanced color being in the color spectrum of yellow to red. Claim 10 is rejected under 35 USC 112 above, and dependant claims 6,7, 11-15 are objected to for depending from a rejected base claim. Claims 16-19 are rejected under 35 USC 112 above. However, they distinguish over the prior art which does not teach nor suggest a color enhanced sapphire or topaz gemstone with one or more surfaces color enhanced due to copper metal or copper oxide.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. BR 200001034(abstract) illustrates a related process.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred J. Parker whose telephone number is (703) 308-3474.

FRED J. PARKER
PRIMARY EXAMINER

Fred J. Parker

May 31, 2002

9-803218